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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,083	12/29/2000	William Jarrett Campbell	2000.044400/TT3219	5023

7590 03/26/2004

George J. Oehling
Williams Morgan & Amerson
7676 Hillmont Suite 250
Houston, TX 77040

EXAMINER

FULLER, RODNEY EVAN

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/751,083

Applicant(s)

CAMPBELL ET AL.

Examiner

Rodney E Fuller

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki, et al. (US 6,329,643).

Regarding claims 7 and 13, Suzuki discloses “a multi-zone furnace (Fig. 2, ref.#s 47, 48, 49) adapted to bake a plurality of wafers for a first bake time, with each zone of the furnace accommodating at least one wafer (Fig. 2, ref.# W); a metrology tool (Fig. 4, ref.# 8) adapted to measure a film thickness of the at least one wafer baked in each zone of the furnace; and a first controller (Fig. 6, ref.# 52) adapted to determine a deposition rate for each zone of the furnace, the deposition rate being determined (column 6, lines 45-49) as a function of the film thickness of the wafer and the first bake time, to assign the deposition rate of one of said zones (column 1, lines 15-16) as a baseline for the other said zones of the furnace, and to adjust the deposition rate of the other said zones (column 1, lines 13-14) of the furnace to be substantially the same as said baseline deposition rate; and wherein the furnace is further adapted to bake the subsequent set of wafers in the furnace with said adjusted deposition rates.”

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Regarding claims 8, 9, 14 and 15, Suzuki discloses "at least one second controller (Fig. 3, ref.#s. 51, 52, 53), the at least one second controller being adapted to adjust the temperature setting of each zone of the furnace; and wherein the first controller is further adapted to determine a temperature setting to set the other said zones of the furnace to achieve said baseline deposition rate, and change the temperature setting of the other said zones to the temperature setting determined (column 1, lines 42-47)."

Regarding claims 10 and 16, Suzuki discloses "wherein the metrology tool further comprises an ellipsometer." (column 6, line 21)

Regarding claims 11, 12, 17 and 18, Suzuki discloses "wherein the first controller is further adapted to determine a second bake time to bake said subsequent set of wafers in the furnace based at least upon said baseline deposition rate." (column 1, 42-47; column 6, lines 45-49)

The method steps of claims 1-6 are met by the operation of Suzuki as applied to claims 7-18.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Cook, et al. (US 2003/0049372) and Moslehi (US 5,436,172) each disclose multi-zone furnace with a temperature and process uniformity control system.

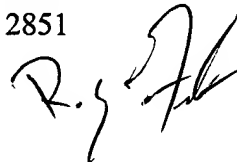
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney E Fuller whose telephone number is 571-272-2118. The examiner can normally be reached on 8:00am - 4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 571-272-2112. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rodney E Fuller
Primary Examiner
Art Unit 2851



March 15, 2004

Notice of References Cited

Application/Control No.

09/751,083

Applicant(s)/Patent Under
Reexamination
CAMPBELL ET AL.

Examiner

Rodney E Fuller

Art Unit

2851

Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-6,329,643	12-2001	Suzuki et al.	219/497
	B	US-5,436,172	07-1995	Moslehi, Mehrdad M.	374/121
	C	US-2003/0049372	03-2003	Cook et al.	427/248.1
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

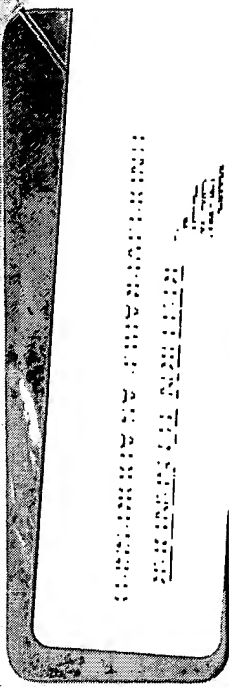
NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

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